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## CHINA'S ENVIRONMENTAL SECTOR

### Issues and Background

China is slowly coming to grips with the myriad of hidden costs created by environmental degradation, which so far have included depletion of natural resources, rising health care costs, and declining agricultural and fishery yields. Deng Nan, Vice Minister of the State Science and Technology Commission and daughter of paramount leader Deng Xiaoping, in May 1992 indicated that China's direct and indirect economic losses to environmental degradation exceed \$19 billion annually. Beijing has not developed a nation-wide system of compiling and analyzing environmental data, but anecdotal evidence suggests that the country faces a witch's brew of worsening air and water pollution, soil erosion, and acid rain:

- A study by the World Health Organization places four Chinese cities--Shenyang, Xian, Beijing, and Guangzhou--among the world's 10 worst for air pollution. Such pollution doubled the incidence of lung cancer in northern China during the 1980's, according to China's Ministry of Public Health.
- According to Chinese estimates, the drinking water of more than 60 percent of the country's population, or roughly 700 million people, fails to meet Beijing's standards--the lowest accepted by the World Health Organization--and is contaminated with lead and mercury as well as human and agricultural wastes. Press reports indicate only 25 percent of urban sewage is treated before it is discharged into rivers.
- Acid rain affects roughly 520,000 square miles of territory--much of it prime agricultural land. In addition to lowering crop and fishery yields, acid rain damages vehicles and industrial and agricultural equipment by accelerating metal oxidation or rusting. China's National Environmental Protection Administration (NEPA) estimates that annual economic losses to acid rain reached nearly \$3 billion during the early 1990s. In two southern provinces alone--Guangzhou and Sichuan--acid rain caused damage worth \$1.5 billion in 1993, according to press reports.

Recognition of these costs has resulted in greater government attention to domestic environmental issues over the past decade. Beijing has adopted nearly 20 environmental protection laws and 200 regulations, including a 1993 tax on enterprises emitting sulphur dioxide aimed at reducing acid rain. Widespread problems in enforcement of these measures prompted Song Jian, State Councilor, State Science and Technology Commission head, and director of the State Council Environmental Protection Committee, to publicly state that China's environmental protection laws should include criminal penalties as severe as those meted out to drug traffickers and smugglers. Song also led an inspection team this spring to monitor enforcement of environmental laws, according to press reports. Although estimates vary, China is increasing spending on cleanup and prevention from less than \$1 billion annually during the past decade to approximately \$3-5 billion annually between 1992 and 1995.

Nevertheless, Song Jian last year stressed that, as a poor country, China's sustainable development program should emphasize development. The widespread growth of small

factories and private enterprises and an emphasis on rapid economic growth has rendered the pollution regime largely ineffective. NEPA chief Qu Geping estimates that over the next decade China needs to spend at least \$4 billion annually to control pollution and nearly \$40 billion to clean up existing damage; at current spending levels, China is likely to spend no more than \$30 billion. Moreover, Beijing's pollution control regime appears designed to limit the economic impact of regulation. Heavily polluting factories are required to move to cities' outskirts rather than being forced to cleanup or close, and China's pollution fines and waste discharge fees are below prevention costs. In many cases, the local level officials charged with collecting fines from offending factories are the same officials who run the factories.

**US Angle.** Opportunities for Western sales of such equipment are likely to remain limited in the near- to mid-term. With a projected cumulative budget deficit of some \$15 billion this year, China's leaders are poorly positioned to devote scarce economic development funds to such unproductive ventures. Moreover, press reports indicate that China's environmental budget is largely used to support some 200 institutes and 17,000 scientists conducting research on environmental issues, rather than on active anti-pollution projects. Chinese enterprises represent an even less attractive market with more than 40 percent of China's state-run enterprises operating in the red and many foreign-invested enterprises having moved to China to escape growing environmental regulation at home.

Local-level environmental efforts and Beijing's international environmental commitments, however, will generate some sales for US and other Western companies. Press reports indicate that the majority of anti-pollution projects are funded by municipal or provincial governments, which—particularly in coastal areas—after a decade of economic reform have access to an expanding pool of investment funding that is outside state control. In addition, China will need to import—probably using World Bank, United Nations, and Japanese government financing—a variety of environmental technologies such as aerosol and CFC replacement equipment to comply with international accords, including the Montreal Protocol; Beijing is lobbying hard for such agreements to include substantial financial assistance and technology transfer from the West to the Third World.

A number of new environmental initiatives may begin to open opportunities for foreign firms to enter the market. China's leaders are anxious to develop an indigenous "green" industry and are encouraging Western companies to establish joint ventures producing technologies, including smokestack filters, environmental monitoring equipment, and waste-to-energy generating technology, according to press reports:

- In April, China founded the Environmental Protection Machinery Industry Association, which—under the direction of the Ministry of Machinery Industry—will manufacture environmental protection machinery and equipment, according to diplomatic reporting. The most needed equipment includes smoke and dust control, desulphurization, and waste water treatment equipment. Other needs include environmental monitoring equipment and waste-to-energy generating technology.
- China is also seeking foreign cooperation in its recently announced its Agenda 21 program, which comprises at least 62 major environmental projects worth \$4 billion.

- Finally, China will probably look to foreign participation in the activities of its two environmental protection industrial bases--the Tianjin Jinnan Environmental Protection Industrial Base, and the recently-established China Yixing Industrial Park for Environmental Science and Technology (PEST).